Server-side Scripting

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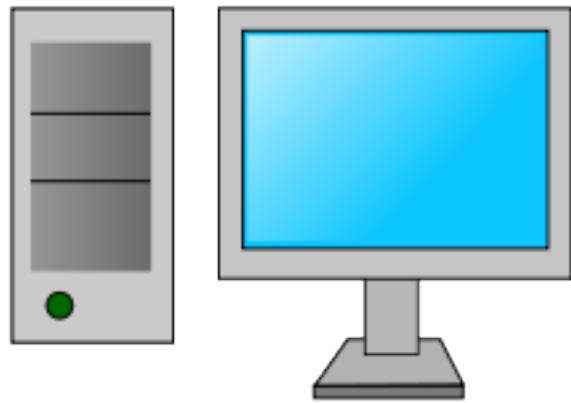
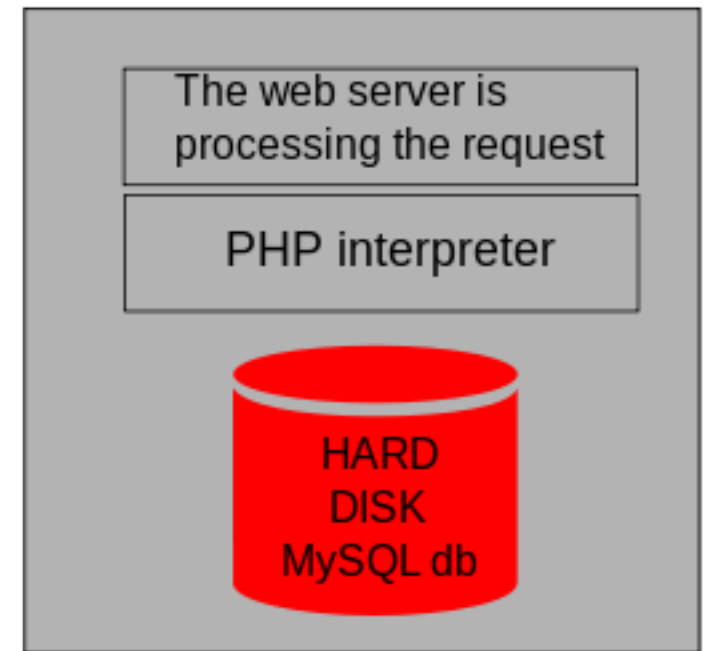http://en.wikipedia.org/wiki/File:Scheme_dynamic_page_en.svg

Server-side scripting is a technique used in website design which involves embedding scripts in an HTML source code which results in a user's (client's) request to the server website being handled by a script running server-side before the server responds to the client's request.

http://en.wikipedia.org/wiki/Server-side_scripting

What is scripting?

- Embed simple code in HTML pages.

- The HTML pages use the code to decide what elements and data to display.

- Existing APIs can be invoked to compute information for inclusion in the web page.

Key components of Server-side scripting

- ***Web Server*** -- makes available documents and handles requests.

- ***Server-side processor*** -- interprets scripts and generates HTML

Web server can refer to either the hardware (the computer) or the software (the computer application) that helps to deliver Web content that can be accessed through the Internet.

http://en.wikipedia.org/wiki/Web_server

Apache web server

- Apache http server project

- http://httpd.apache.org

- Apache foundation started to support the web server project, but eventually extended to a multitude of other projects.
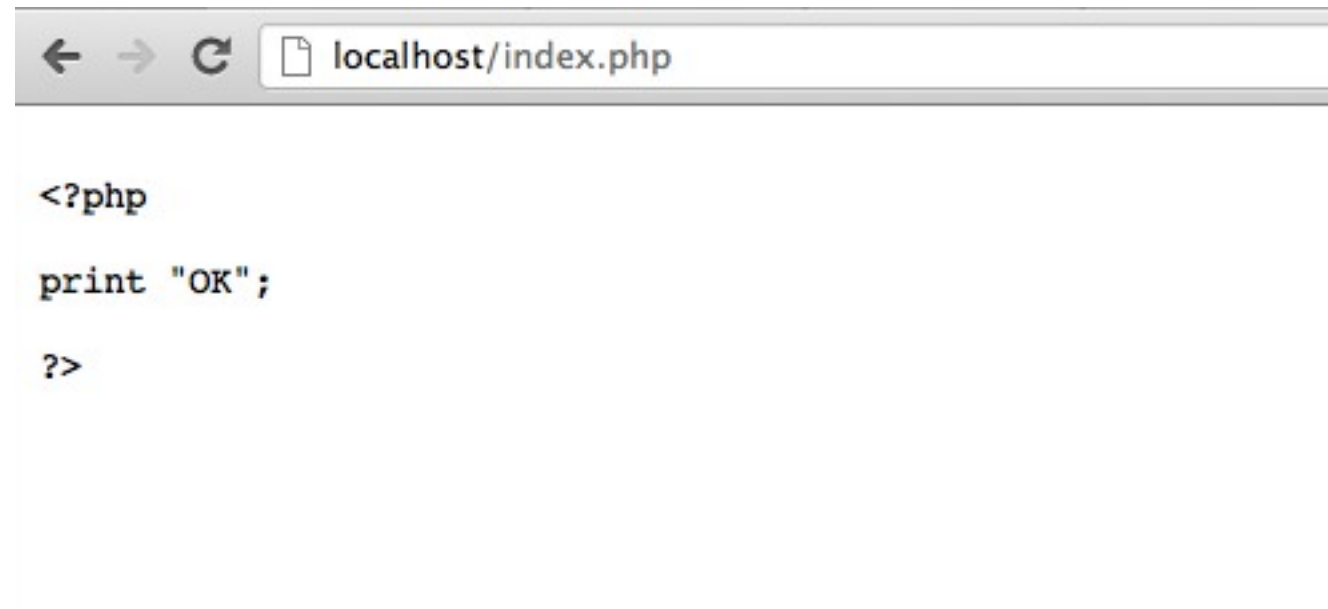
DEMO

configuring Apache to work with PHP

Configure directory DocumentRoot - the directory out of which web server will serve the documents (html, php, etc). By default, all requests are taken from this directory.
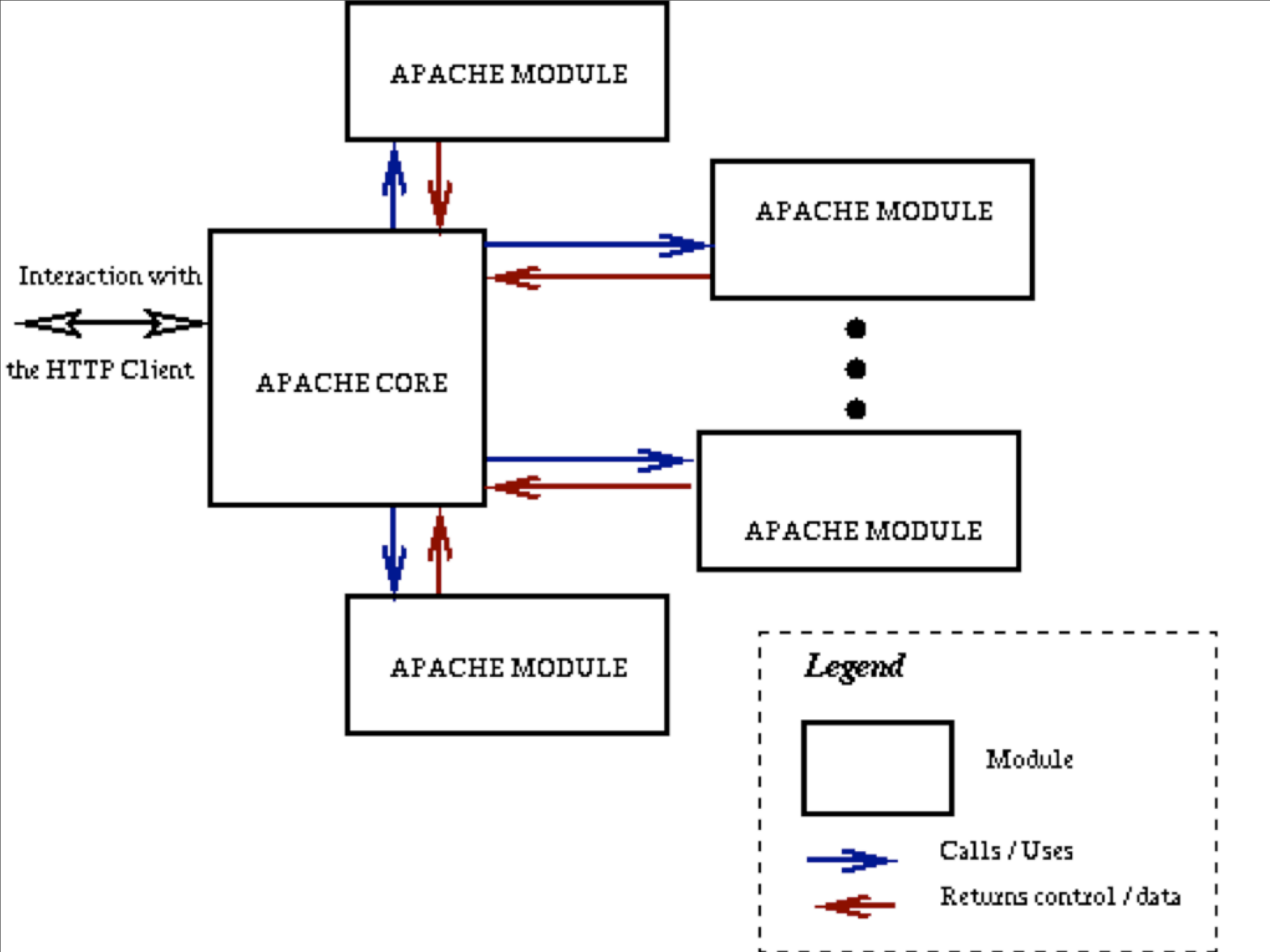
DocumentRoot "/Library/WebServer/Documents"

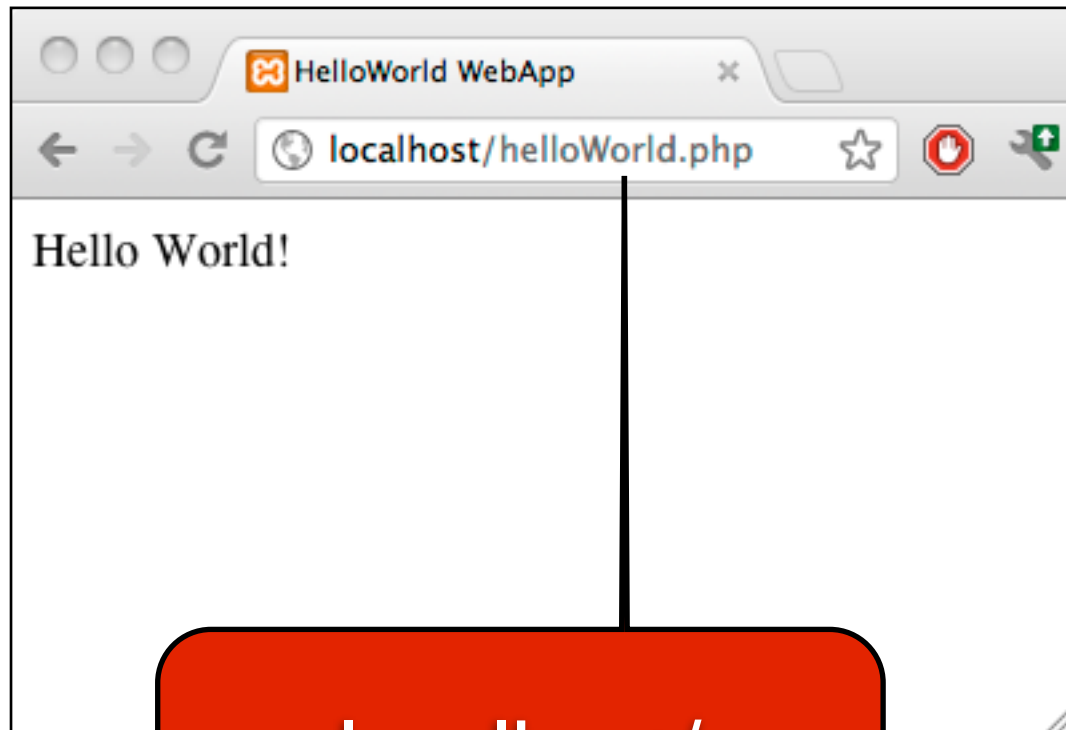# What if we open PHP file in the browser?


```
localhost/index.php

<?php

print "OK";

?>
```

php5_module should be enabled to handle *.php

LoadModule php5_module libexec/apache2/libphp5.so

APACHE MODULE

APACHE MODULE

Interaction with
the HTTP Client

APACHE CORE

APACHE MODULE

APACHE MODULE

Legend

Module

Calls / Uses

Returns control / data

Remember --
Code embedded into HTML

Hello World!

localhost/
helloWorld.php

```
<html>
<head>
  <title>HelloWorld WebApp</title>
</head>
<body>
<?php echo '<p>Hello World!</p>'; ?>
</body>
</html>
```

HTML with PHP

PHP is a general-purpose server-side scripting language originally designed for Web development to produce dynamic Web pages. It is one of the first developed server-side scripting languages to be embedded into an HTML source document rather than calling an external file to process data. The code is interpreted by a Web server with a PHP processor module which generates the resulting Web page.

http://en.wikipedia.org/wiki/PHP

PHP Flow
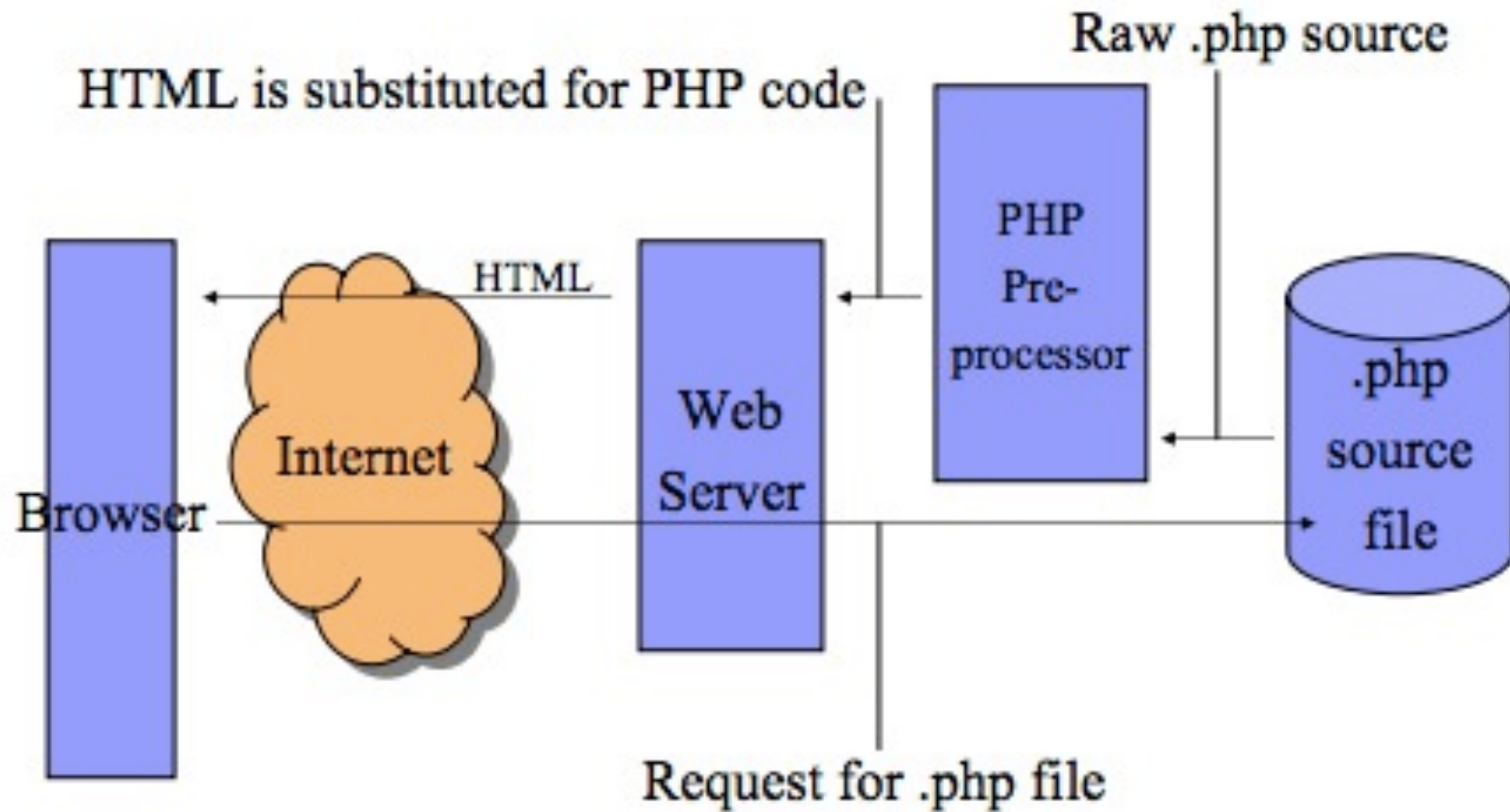
Adding interaction

intro.html

```
<html>
<body>

<form action="welcome.php" method="post">
Name: <input type="text" name="fname" />
Age: <input type="text" name="age" />
<input type="submit" />
</form>

</body>
</html>
```
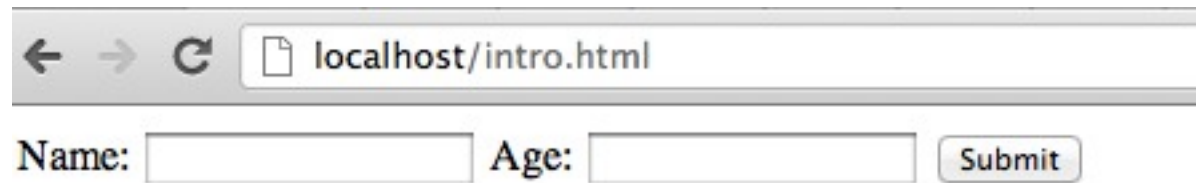
welcome.php

```
<html>
<body>

Welcome <?php echo $_POST["fname"]; ?>!<br />
You are <?php echo $_POST["age"]; ?> years old.

</body>
</html>
```
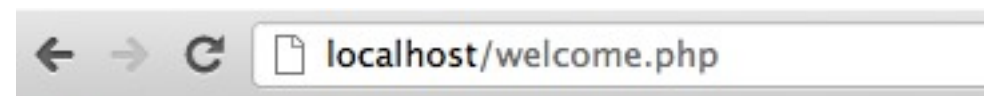
Result

localhost/intro.html

Name: [   ] Age: [   ] Submit

localhost/welcome.php

Welcome Andrei!
You are 27 years old.

```
<html>
<body>

Welcome Andrei!<br />
You are 27 years old.

</body>
</html>
```

HTML table from CSV file

```php
<?php

$lines = preg_split('~\s*[\r\n]+\s*~', file_get_contents('prod.txt'));

foreach($lines as $i => $line) {
    $pairs = explode(';', $line);
    foreach($pairs as $pair) {
        list($column, $value) = explode('=', $pair, 2);
        $columns[$column] = true;
        $rows[$i][$column] = $value;
    }
}
$columns = array_keys($columns);
echo '<table><thead><tr>';

foreach($columns as $column) {
    echo '<th>'.$column.'</th>';
}
echo '</tr></thead><tbody>';

foreach($rows as $row) {
    echo '<tr>';
    foreach($columns as $column) {
        echo '<td>'.$row[$column].'</td>';
    }
    echo '</tr>';
}
echo '</tbody></table>';
?>
```

**difficult to read
and
difficult to maintain**

DEMO

101implementation:PHP

Summary

You learned about ...

- the principles behind server-side scripting,

- the role of a Web server in web applications,

- Apache web server basic configuration,

- the generation of dynamic web pages with PHP,

- and, in fact, web programming with PHP.

Resources

- http://www.w3schools.com/php/default.asp

- http://www.php.net